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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,564	08/18/2003	Bruce McCorkendale	SYMC1032	4932
34350 7590 07/30/2007 GUNNISON, MCKAY & HODGSON, L.L.P. 1900 GARDEN ROAD, SUITE 220 MONTEREY, CA 93940			EXAMINER KHOSHNOODI, NADIA	
			ART UNIT 2137	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/643,564

Applicant(s)

MCCORKENDALE ET AL.

Examiner

Nadia Khoshnoodi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 15-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 15-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claims 2 and 12-14 have been cancelled. Applicant's arguments/amendments with respect to amended claims 1, 6-8, 10, 15, and 20; previously presented claims 3-5, 9, 16-19, and 21-24; and newly presented claims 25-28 filed 5/7/2007 have been fully considered but they are not persuasive. The Examiner would like to point out that this action is made final (See MPEP 706.07a).

Response to Arguments

Applicants contend that Hockey fails to teach/suggest "comparing outbound traffic on a host computer system to inbound traffic on the host computer system." Examiner respectfully disagrees. Hockey et al. teach that virus worms have characteristics that cause the same message to be sent from various sources to various destinations within a network (page 19, lines 2-8), i.e. the reason why inbound and outbound traffic are compared. Hockey et al. further teach that the textual contents of the mail message/attached file are stored when they are received by the system, i.e. inbound traffic (page 19, lines 20-25). Finally, Hockey et al. teach a simple check which contains a comparison step of new messages being sent, i.e. outbound traffic, with messages that have recently been received within a certain time range, i.e. inbound traffic (page 19, line 35 – page 20, line 30). Examiner would like to note that Applicants have not specifically defined what inbound and what outbound traffic are compared, thus the Examiner has broadly interpreted (according to MPEP 2111) inbound traffic to mean recent traffic which has been received by the system and outbound traffic to mean traffic which is or has recently been sent/distributed.

Thus, the Examiner maintains that Hockey teaches comparing outbound traffic on a host computer system to inbound traffic on the host computer system.

Applicants contend that Chesla et al. fail to teach/suggest “comparing at least a portion of the copied inbound traffic with at least a portion of copied outbound traffic.” Examiner respectfully disagrees. Chesla et al. teach that copies are first maintained in trap buffers to allow further scrutiny of the incoming/outgoing traffic (paragraphs 240, 300, and 365). Chesla et al. further teach that the unfiltered traffic received, i.e. inbound traffic, and the filtered traffic, i.e. outbound traffic are compared in order to determine whether or not there is a potential attack (par. 137). Furthermore, in another section, Chesla et al. also teach that the number of inbound packets are compared with a number of outbound packets where the result is used in order to determine the likelihood that an attack is underway (par. 236-237). Finally, Chesla also teach that the arrival times of a previous message that was received and transmitted, i.e. outbound traffic, is compared with the arrival time of a new message that is received, i.e. inbound traffic, in order to determine whether or not an attack is underway (par. 301). Examiner would like to note that Applicants have not specifically defined what inbound and what outbound traffic are compared, thus the Examiner has broadly interpreted (according to MPEP 2111) inbound traffic to mean recent traffic which has been received by the system and outbound traffic to mean traffic which is or has recently been sent/distributed. Thus, the Examiner maintains that Chesla et al. teach comparing at least a portion of the copied inbound traffic with at least a portion of copied outbound traffic.

Due to the reasons stated above, the Examiner maintains rejections with respect to the pending claims 1, 3-11 and 14-28. Therefore, it is the Examiner's conclusion that the pending claims are not patentably distinct or non-obvious over the prior art of record as presented.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, as they do not fall under any of the statutory classes of inventions. The language in the claims raise an issue because the claims are directed merely to an abstract idea that is not tied to an article of manufacture which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Specifically, these claims recite "a computer program product comprising a tangible computer readable medium containing computer program code" where the Applicant's disclosure states that "a computer program product comprises a medium configured to store or transport computer readable code..." where in the examples of acceptable computer programs products, Applicants have allowed for "signals transmitted over a network representing computer readable code" where signals are currently non-statutory subject matter (see Applicant's disclosure, the second paragraph on page 25).

Claim Rejections - 35 USC § 102

I. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

II. Claims 1, 3-7, and 26-28 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Hockey, WO 02/19069 A2.

As per claims 1 and 26:

Hockey teaches a method/computer program product comprising: comparing outbound traffic on a host computer system to inbound traffic on the host computer system (pg. 19, line 10 – pg. 20, line 3); and determining if malicious code is detected on the host computer system based on the comparing (pg. 20, line 26 – pg. 21 line 30). Furthermore, Hockey teaches the method further comprising: if malicious code is detected, providing a notification of the malicious code detection (pg. 21, lines 22-30).

As per claim 3:

Hockey teaches the method of claim 1. Furthermore, Hockey teaches the method wherein the comparing is performed using a similarity comparison technique (pg.21, lines 4-14).

As per claim 4:

Hockey teaches the method of claim 1. Furthermore, Hockey teaches the method wherein at least a portion of the outbound traffic is compared to at least a recently received portion of the

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inbound traffic, the at least a portion of the outbound traffic being subsequent in time to the at least a recently received portion of the inbound traffic (pg. 19, line 10 – pg. 20, line 3).

As per claim 5:

Hockey teaches the method of claim 1. Furthermore, Hockey teaches the method wherein the inbound traffic is received at the host computer system from a source port, and wherein the outbound traffic is for sending to a destination port, and further wherein the source port and the destination port are the same port (pg. 21, lines 4-14).

As per claim 6:

Hockey teaches the method of claim 1. Furthermore, Hockey teaches the method wherein the inbound traffic is received on the host computer system from a source port, and wherein the outbound traffic is for sending to a destination port, and further wherein the source port and the destination port are different ports (pg. 22, lines 1-16).

As per claim 7:

Hockey teaches the method of claim 1. Furthermore, Hockey teaches the method further comprising: implementing protective actions (pg. 21, lines 22-35).

As per claim 27:

Hockey teaches the computer program product of claim 26. Furthermore, Hockey teaches the method wherein at least a portion of the outbound traffic is compared to at least a recently received portion of the inbound traffic, the at least a portion of the outbound traffic being subsequent in time to the at least a recently received portion of the inbound traffic (pg. 19, line 10 – pg. 20, line 3) and further wherein the comparing is performed using a similarity comparison technique (pg.21, lines 4-14).

As per claim 28:

Hockey teaches the computer program product of claim 26. Furthermore, Hockey teaches the method further comprising: implementing protective actions (pg. 21, lines 22-35).

III. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

IV. Claims 15-25 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Chesla et al., US Pub. No. 2004/0250124.

As per claim 15:

Chesla et al. teach a method comprising: intercepting inbound traffic on a host computer system (par. 121); copying the inbound traffic to an inbound traffic memory area, the copying the inbound traffic generating copied inbound traffic (par. 365-370); releasing the inbound traffic (par. 353-355); intercepting outbound traffic on the host computer system (par. 149); copying the outbound traffic to an outbound traffic memory area, the copying the outbound traffic generating copied outbound traffic (par. 300); releasing the outbound traffic (par. 353-355); comparing at least a portion of the copied inbound traffic with at least a portion of the copied outbound traffic (par. 137); determining if malicious code is detected on the host computer system based on the comparing (par. 137); and if malicious code is detected, providing a notification of the malicious code detection (par. 435).

As per claim 16:

Chesla et al. teach the method of Claim 15. Furthermore, Chesla et al. teach wherein the comparing is performed using a similarity comparison technique (par. 159).

As per claim 17:

Chesla et al. teach the he method of claim 15. Furthermore, Chesla et al. teach wherein the at least a portion of the copied outbound traffic is subsequent in time to the at least a portion of the copied inbound traffic (par. 159).

As per claim 18:

Chesla et al. teach the he method of claim 15. Furthermore, Chesla et al. teach the method further comprising: prior to the copying the outbound traffic, if the outbound traffic correlates to a prior name resolution lookup performed on the host computer system, releasing the outbound traffic (par. 134 and 289).

As per claim 19:

Chesla et al. teach the he method of claim 15. Furthermore, Chesla et al. teach wherein the inbound traffic is copied to the inbound traffic memory area on a per port basis (par. 189), and wherein the outbound traffic is copied to the outbound traffic memory area on a per destination port basis (par. 295).

As per claim 20:

Chesla et al. teach a method comprising: intercepting inbound traffic on a host computer system (par. 121); copying the inbound traffic to an inbound traffic memory area, the copying the inbound traffic generating copied inbound traffic (par. 264); releasing the inbound traffic (par. 353-355); intercepting outbound traffic on the host computer system(par. 149); buffering the outbound traffic in an outbound traffic memory area, the buffering the outbound traffic

generating buffered outbound traffic (par. 149); comparing at least a portion of the copied inbound traffic with at least a portion of the buffered outbound traffic (par. 137 and 159); determining if malicious code is detected on the host computer system based on the comparing (par. 137); if malicious code is detected, providing a notification of the malicious code detection (par. 354); and if malicious code is not detected, releasing the at least a portion of the buffered outbound traffic (par. 160).

As per claim 21:

Chesla et al. teach the method of claim 20. Furthermore, Chesla et al. teach wherein the comparing is performed using a similarity comparison technique (par. 159).

As per claim 22:

Chesla et al. teach the method of Claim 20. Furthermore, Chesla et al. teach wherein the at least a portion of the buffered outbound traffic is subsequent in time to the at least a portion of the copied inbound traffic (par. 159).

As per claim 23:

Chesla et al. teach the method of claim 20. Furthermore, Chesla et al. teach the method further comprising: prior to buffering the outbound traffic, if the outbound traffic correlates to a prior name resolution lookup performed on the host computer system, releasing the outbound traffic (par. 134 and 289).

As per claim 24:

Chesla et al. teach the method of claim 20. Furthermore, Chesla et al. teach wherein the inbound traffic is copied to the inbound traffic memory area on a per port basis (par. 189), and

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wherein the outbound traffic is buffered in the outbound traffic memory area on a per destination port basis (par. 295).

As per claim 25:

Chesla et al. teach the method of claim 20. Furthermore, Chesla et al. teach wherein if malicious code is detected, implementing protective actions (par. 134-135).

Claim Rejections - 35 USC § 103

V. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

VI. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hockey, WO 02/19069 A2 as applied to claim 2 above, and further in view of Chesla et al., US Pub. No. 2004/0250124.

As per claim 8:

Hockey substantially teaches the method of claim 1. Hockey further teaches that a message digest may be stored when the traffic is intercepted (pg. 17, line 33 – pg. 18, line 17). Not explicitly disclosed is the method further comprising: intercepting the inbound traffic; copying the inbound traffic to an inbound traffic memory area, the copying the inbound traffic generating copied inbound traffic; releasing the inbound traffic; intercepting the outbound traffic; copying the outbound traffic to an outbound traffic memory area, the copying the outbound traffic generating copied outbound traffic; and releasing the outbound traffic. However, Chesla

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et al. teach that copies of values of the incoming traffic/outgoing traffic may be stored in both inbound and outbound directions in order to allow for detecting possible attacks. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Hockey to store a copy of the inbound and outbound traffic in different memory areas in order to determine if a possible flooding attack (as one example) is underway. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since Chesla et al. suggest that using a list of incoming/outgoing signatures and monitoring that list closely (while still releasing the traffic) provides a great technique for various attack detections on a network in par. 353-355.

As per claim 9:

Hockey and Chesla et al. substantially teach the method of claim 8. Furthermore, Chesla et al. teach wherein the comparing comprises: comparing at least a portion of the copied inbound traffic with at least a portion of the copied outbound traffic.

As per claim 10:

Hockey substantially teaches the method of claim 1. Not explicitly disclosed is the method further comprising: intercepting the inbound traffic; copying the inbound traffic to an inbound traffic memory area, the copying the inbound traffic generating copied inbound traffic; releasing the inbound traffic; intercepting the outbound traffic; buffering the outbound traffic in an outbound traffic memory area, the buffering the outbound traffic generating buffered outbound traffic; and if malicious code is not detected releasing the buffered outbound traffic. However, Chesla et al. teach that copies of values of the incoming traffic/outgoing traffic may be

stored in both inbound and outbound directions in order to allow for detecting possible attacks. Furthermore, Chesla et al. teach wherein buffering techniques may be used on outgoing traffic to lower the rate at which the traffic can continue on to its final destination. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Hockey to store a copy of the inbound and outbound traffic in different memory areas in order to determine if a possible flooding attack (as one example) is underway, as well as to buffer the outgoing traffic. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since Chesla et al. suggest that using a list of incoming/outgoing signatures and monitoring that list closely (while still releasing the traffic) provides a great technique for various attack detections on a network in par. 353-355. Furthermore, Chesla et al. suggest that buffering the traffic can lessen the impact of an attack, since by buffering the outgoing traffic the system allows for lowering the rate at which the traffic can proceed in par. 149.

As per claim 11:

Hockey and Chesla et al. substantially teach the method of claim 10. Furthermore, Chesla et al. teach wherein the comparing comprises: comparing at least a portion of the copied inbound traffic with at least a portion of the buffered outbound traffic (par. 149).

**References Cited, Not Used*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **US Pub. No. 2003/0154255** has been cited because it is relevant due to the manner in which the invention has been claimed.


Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadia Khoshnoodi whose telephone number is (571) 272-3825. The examiner can normally be reached on M-F: 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Nadia Khoshnoodi
Examiner
Art Unit 2137
7/21/2007

NK


MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2137